

DEVICE FOR PREVENTING SIMULTANEOUS DRAWING-OUT OF MULTI-DRAWER CABINET

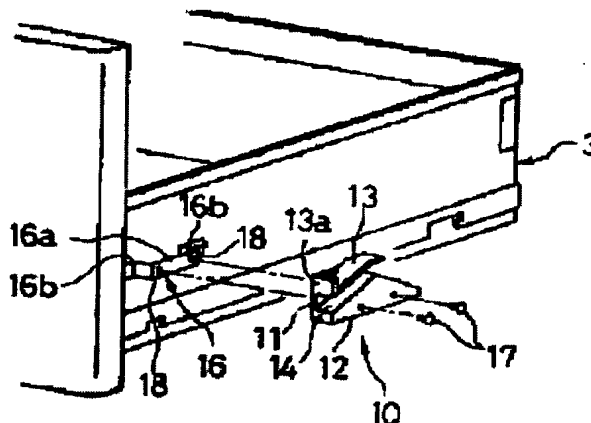
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Applicant: OKAMURA MFG CO LTD
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Abstract of JP10179289

PROBLEM TO BE SOLVED: To easily and firmly mount on the side face of a drawer a guide for use in a device preventing simultaneous drawing-out of a plurality of drawers and enhance its durability.

SOLUTION: A mounting member 16 having a tapped hole 18 in its projecting part 16a pointed to the outside is secured to the side face of a drawer 3 opposite to a lift rod vertically movably attached to the inner surface of the casing of a cabinet, and a recess, formed in the inner surface of a guide 10 having a push-up projection and a push-down projection 13, by which an engagement pin projecting from the lift rod is guided in such a way as to move up and down, and having a stopper surface 13a stopping forward movement of each drawer 3, is fitted over the projecting part 16a of the mounting member 16, and the guide 10 is secured to the side face of the drawer 3 by a lock screw 17 which is threaded into the tapped hole 18.



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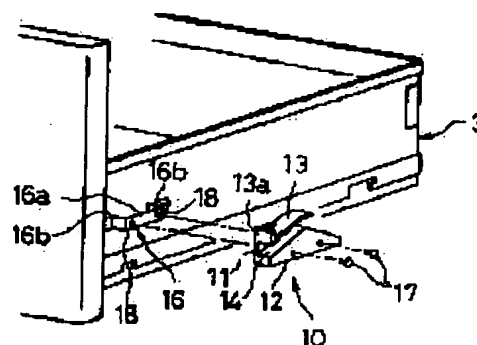
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(54) DEVICE FOR PREVENTING SIMULTANEOUS DRAWING-OUT OF MULTI-DRAWER CABINET**(57)Abstract:**

PROBLEM TO BE SOLVED: To easily and firmly mount on the side face of a drawer a guide for use in a device preventing simultaneous drawing-out of a plurality of drawers and enhance its durability.

SOLUTION: A mounting member 16 having a tapped hole 18 in its projecting part 16a pointed to the outside is secured to the side face of a drawer 3 opposite to a lift rod vertically movably attached to the inner surface of the casing of a cabinet, and a recess, formed in the inner surface of a guide 10 having a push-up projection and a push-down projection 13, by which an engagement pin projecting from the lift rod is guided in such a way as to move up and down, and having a stopper surface 13a stopping forward movement of each drawer 3, is fitted over the projecting part 16a of the mounting member 16, and the guide 10 is secured to the side face of the drawer 3 by a lock screw 17 which is threaded into the tapped hole 18.

**LEGAL STATUS**

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CLAIMS

[Claim(s)]

[Claim 1] The medial surface of the box in the multistage drawer cabinet which equipped with two or more drawers in the shape of multistage up and down in the box is equipped with an up-down lever as vertical movement being possible. Prepare two or more bosses in the necessary location of the medial surface of this up-down lever, and a boss is contacted by becoming quantities [boss] on the side face of said boss and each drawer which counters. In the stopper side which prevents migration to the front of each drawer, and the condition that the boss is distant from the stopper side up and down The Oshiage projection to which it ****s to said boss and an up-down lever is moved up when a drawer moves to the front, A guidance implement equipped with the depression projection which it ****s [projection] to said boss and drops an up-down lever at the time of migration behind a drawer is formed. In the coincidence drawer arrester in the multistage drawer cabinet which prepared the catch who furthermore does suppression maintenance of the up-down lever in the location where a boss becomes a box with quantities [side / stopper] With the setscrew which fits into the projected part of said attachment member, and screws the hollow which fixed the attachment member which ****s the method of an outside to a suitable projected part, and has a hole on the side face of an up-down lever and the drawer which counters, and was established in it at the medial surface of said guidance implement in said screw-thread hole The coincidence drawer arrester in the multistage drawer cabinet characterized by fixing a guidance implement on the side face of a drawer.

[Claim 2] The coincidence drawer arrester in the multistage drawer cabinet according to claim 1 which prepared the hollow inside the Oshiage projection in a guidance implement.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] In the cabinet which equipped vertical two or more stages with the drawer, two or more drawers are pulled out by coincidence and this invention relates to the equipment which enabled it to prevent that a cabinet bends forward by front migration of a center of gravity.

[0002] As this conventional kind of equipment, there are some which are indicated by JP,60-18105,Y, for example. This equipment equips with an up-down lever the medial surface of the box in the multistage drawer cabinet which equipped with two or more drawers in the shape of multistage up and down in the box as vertical movement being possible. Prepare two or more bosses in the necessary location of the medial surface of this up-down lever, and a boss is contacted by becoming quantities [boss] on the side face of said boss and each drawer which counters. In the stopper side which prevents migration to the front of each drawer, and the condition that the boss is distant from the stopper side up and down The Oshiage projection to which it ****s to said boss and an up-down lever is moved up when a drawer moves to the front, A guidance implement equipped with the depression projection which it ****s [projection] to said boss and drops an up-down lever at the time of migration behind a drawer is formed. From what prepared the catch who furthermore does suppression maintenance of the up-down lever in the location where a boss becomes a box with quantities [side / stopper], if any one drawer is pulled out, all other drawers will be blocked and two or more drawers will be pulled out.

[0003] However, by forming reverse T character-like the piece of attachment in the inferior surface of tongue of a guidance implement in one, and fitting into the mounting hole which drilled this in the migration rail which fixed on the side face of a drawer in above-mentioned conventional equipment The guidance implement is attached in the side face of a drawer, and there is a possibility accompanying receipts and payments of a drawer that a guidance implement may separate from a migration rail for the repeat load to a guidance implement or an impact, or the piece of attachment may be damaged from the base.

[0004] This invention aims at offering the coincidence drawer arrester in the multistage drawer cabinet which raised endurance while it can attach a guidance implement simply [the side face of a drawer], and firmly in view of the above troubles which a Prior art has.

[0005]

[Means for Solving the Problem] According to this invention, the above-mentioned technical problem is solved as follows.

(1) Equip with an up-down lever the medial surface of the box in the multistage drawer cabinet which equipped with two or more drawers in the shape of multistage up and down in the box as vertical movement being possible. Prepare two or more bosses in the necessary location of the medial surface of this up-down lever, and a boss is contacted by becoming quantities [boss] on the side face of said boss and each drawer which counters. In the stopper side which prevents migration to the front of each drawer, and the condition that the boss is distant from the stopper side up and down The Oshiage projection to which it ****s to said boss and an up-down lever is moved up when a drawer moves to the front, A guidance implement equipped with the depression projection which it ****s [projection] to said boss and drops an up-down lever at the time of migration behind a drawer is formed. In the coincidence drawer arrester in the multistage drawer cabinet which prepared the catch who furthermore does suppression maintenance of the up-down lever in the location where a boss becomes a box with quantities [side / stopper] A guidance implement is fixed on the side face of a drawer with the setscrew

which fits into the projected part of said attachment member, and screws the hollow which fixed the attachment member which ****s the method of an outside to a suitable projected part, and has a hole on the side face of an up-down lever and the drawer which counters, and was established in it at the medial surface of said guidance implement in said screw-thread hole.

[0006] (2) Prepare a hollow inside the Oshiage projection in a guidance implement in the above-mentioned (1) term.

[0007]

[Embodiment of the Invention] Drawing 1 shows the cabinet for document receipt equipped with one example of this invention, and three steps of drawers (2), (3), and (4) are held in the box (1) of a cabinet under Kaminaka where the thing of the lower berth made the dimension of the vertical direction size. Drawing 1 -7 show one example of this invention equipment.

[0008] Fitting of the sliding of the vertical direction of the up-down lever (7) of short ** is made a little freer than the height of a box (1) to the concave (6) long in the vertical direction of the medial surface of the side plate (5) of the method of the right of a box (1) formed a little in anterior part, and it is prevented that an up-down lever (7) falls out from a concave (6) by the support plate (8) of one pair of upper and lower sides and (8). Pieces (7a) when the boss (9) of the sense protrudes on the location corresponding to each drawer in an up-down lever (7) among three pieces, and it gets down to it and it extends horizontally toward the method of inside in the upper limit section of an up-down lever (7) in upper ** (1a) in a box (1) are formed successively.

[0009] The substrate (11) with a guidance implement (10) perpendicular to a part of ** quantity has fixed mostly with said boss (9) in the right lateral of the drawer (3) of the middle and the lower berth, and (4).

[0010] As shown in drawing 5 and drawing 6, the inclination slot (14) the depression projections (13) of the triangle toward which a base inclines in the method of Gokami are formed successively by the lateral-surface upper part, and the Oshiage projection (12) of a top Mukoyama form similarly turns [slot] to the front lower part which said boss (9) may pass forward and backward between both projections (12) and (13) is formed in the lateral-surface lower part of the substrate (11) of this guidance implement (10). The front end side of a depression projection (13) is making the perpendicular stopper side (13a).

[0011] The long hollow (15) of a long groove is formed in the part located inside the Oshiage projection (12) in a substrate (11) at the cross direction.

[0012] As this guidance implement (10) is shown in drawing 6, on the side face of an up-down lever (7), the drawer (3) which counters, and (4) The piece of attachment (16b) before and behind the attachment member (16) which consists of strip material which has the projected part (16a) which makes a plane view U shape and projects toward the method of an outside in pars intermedia is welded. By making one pair of setscrews (17) screw in one pair of screw-thread holes (18), before and after carrying out outer fitting of the hollow (15) to the projected part (16a) of an attachment member (16), and making it penetrate from the outside, and puncturing the free end side of a projected part (16a) It has fixed firmly on the side face of a drawer (3) and (4). At this time, by existence of the projected part (16a) of an attachment member (16), the point of a setscrew (17) is pulled out and is not touching the side face of (3) and (4).

[0013] Into the back part, the piece of attachment (19b) before and behind the stopper (19) which has the projected part (the front end side of this projected part turns into a stopper side) (19a) which makes a plane view U shape to pars intermedia, and projects in the method of an outside like an attachment member (16) has fixed by welding or the **** stop from the boss (9) in the right lateral of the drawer (2) of an upper case. The location of the vertical direction of this stopper (19) is located up than a most upper boss (9), when it is located in the original location whose up-down lever (7) is a minimum location, as shown in drawing 2, and when located in the pendant location shown in drawing 3 which an up-down lever (7) mentions later, and the 2nd rise location shown in drawing 4, he is trying to serve as a boss (9) with ** quantity mostly.

[0014] The depression plate (20) which inclines toward the method of Gokami like the base of an above-mentioned depression projection (13) is formed in the part behind the stopper (19) in the right lateral of the drawer (2) of an upper case.

[0015] The catch (21) is prepared in the medial-surface upper part of the side plate (5) of the method of the right of a box (1). The catch (21) consists of a fastener (22) which fixed to the side plate (5) as straddled the concave (6) in which the up-down lever (7) is held, and a grasping implement (23) with

which this fastener (22) was equipped as vertical movement being possible a little.

[0016] The dead air space (24) upper limit is blockaded with an upper wall (22a), and a lower limit carries out [dead air space] opening is formed in the center of a fastener (22). While countering mutually the edges-on-both-sides section of the lower limit section of dead air space (24), a sense projection (22b) is formed, and opening (24a) of the lower limit of dead air space (24) is narrowed by this.

[0017] The grasping implement (23) consists of one pair of pieces of grasping (26) to which only a stroke (S) and the (drawing 7 (a) reference) hang through opening (24a) of a fastener (22) in the dead air space (24) of a fastener (22) from the base (25) of the shape of a rectangular parallelepiped by which fitting was carried out as sliding of the vertical direction being possible, and the inferior surface of tongue of a base (25) and in which elastic bending is possible, and (26).

[0018] The flection (26a) (26a) mutually crooked in the shape of **** toward the method of inside is formed in the lower limit section of the piece of both grasping (26), and (26), and the maximum narrow interval (W) between both flections (26a) (26a) is made into smallness from the diameter of the engagement pin (27) which protruded on the inside of an up-down lever (7) corresponding to the catch (21).

[0019] Between the inferior surface of tongue of a base (25), and the piece of both grasping (26), (26) and its flection (26a) (26a), the dead air space (28) it was made to move idly in the vertical direction a little where an engagement pin (27) is grasped between the piece of both grasping (26) and (26) is formed.

[0020] Cylinder lock (29) is formed in nothing [front right-hand side] of the drawer (2) of an upper case. By this cylinder lock's (29)'s inserting a key (illustration abbreviation) in the key insertion slot on front (30), and rotating about 90 degrees (illustration abbreviation) of internal Rota As a fictitious outline similarly shows the method of the right-hand side which shows the key lever (31) of Rota and one to drawing 1 with a broken line from the unlocking location to turn to While rotating right above to the locking location to turn to, the point of a key lever (31) rushes in into the top rail (1a) of a box (1), pulling out at this time and preventing advance of (2) The piece of an up-down lever (7) top (7a) is pushed up at the tip of a key lever (31), and it may have comes to go up to the 2nd rise location which mentions an up-down lever (7) later.

[0021] In above-mentioned equipment, as shown in drawing 1 and drawing 2 , when all drawers (2), (3), and (4) are pushed and it unlocks cylinder lock (29), the up-down lever (7) is located in the original location which is a minimum location with a self-weight. At this time, the front end of the inclination slot (14) of each guidance implement (10) is located immediately after the boss (9) of an up-down lever (7), and the projected part (19a) of the stopper (19) of the drawer (2) of an upper case is located above a corresponding boss (9). Therefore, each drawer (3) can be pulled out freely.

[0022] As shown in drawing 7 (a), moreover, catch's (21)'s grasping implement (23) (36a) of a base (25) contacts a sense projection (22b) among fasteners (22). And it is in the condition of approaching in contact with the lower limit section of the piece of both grasping (26), and an engagement pin (27), and the stroke (S) exists between the top face of a base (25), and the upper wall (22a) of a fastener (22). The location of the engagement pin at this time (27) (and up-down lever (7)) is shown in drawing 7 (a) as a original location (X1).

[0023] If the drawer (3) of the middle is pulled out from this condition as shown in drawing 3 for example, in case it passes through the inclination slot (14) of the guidance implement (10) of the middle, a boss (9) will be pushed up by the Oshiage projection (12), and an up-down lever (7) will be raised in connection with it to it. As a rise of this up-down lever (7) is interlocked with, only a stroke (S) is pushed up by the engagement pin (27) and a grasping implement (23) is shown in drawing 7 (b) After the upper limit of a grasping implement (23) contacts an upper wall (22a), it goes up an engagement pin (27) extending the flection (26a) (26a) of the piece of both grasping (26), and (26), and inserts in dead air space (28).

[0024] The condition that the engagement pin (27) (and up-down lever (7)) arrived at the 1st rise location (X2) which is an upper limit location is shown.

[0025] After a boss (9) passes through an inclination slot (14), as drawing 7 (b) is shown in drawing 7 (c), an up-down lever (7) descends with a self-weight in the condition [being grasped by the grasping implement (23)] to the **** location (X3) where a grasping implement (23) arrives at a minimum location. This **** location (X3) is mostly in agreement with the 2nd rise location (X4) which is an upper limit location when raising an up-down lever (7) by the key stroke mentioned later.

[0026] When the up-down lever (7) is located in a **** location (X3), it becomes the stopper side (13a)

of each guidance implement (10) and the front end side of the projected part (19a) of a stopper (19), and quantities [boss / each / (9)]. Therefore, advance is prevented by each boss (9) and the drawer (2) of an upper case and the lower berth and (4) cannot be pulled out.

[0027] If the drawer (3) of the middle is pushed in the above-mentioned condition, in case the boss (9) of the middle passes through the inclination slot (14) of a guidance implement (10), it is depressed by depression projection (13), and an engagement pin (27) will be made to secede from catch's (21)'s grasping implement (23) compulsorily, and will be dropped to an up-down lever (7) to the original location (X1) shown in drawing 7 (a). Therefore, it can pull out now in any drawer (3) after that.

[0028] From the condition shown in drawing 2, when the drawer (2) of an upper case is pulled out, a stopper (19) and a depression plate (20) only pass through the upper part of the boss (9) of an upper case, and a boss (9) and an up-down lever (7) are not raised. Therefore, other drawers (3) or (4) can be pulled out, with the drawer (2) of an upper case pulled out. Since the drawer (2) of an upper case has made capacity lightweight small, even if it pulls this out to other drawers (3), or (4) and coincidence, it is because there is no possibility of causing the fall of a cabinet.

[0029] If the drawer (2) of an upper case is back pushed in after pulling out to one of other drawers (3), or (4) and coincidence and holding an up-down lever (7) in a **** location (X3), where the drawer (2) of an upper case is pulled out, a corresponding boss (9) will be depressed in slide contact with a depression plate (20), and an up-down lever (7) will be returned to a original location (X1). Therefore, there is no possibility that it might be said that a boss (9) was damaged in contact with the back end side of a stopper (19) and a projected part (19a).

[0030] When the drawer (3) of after that further others or (4) are pushed in back, a corresponding boss (9) is pushed up along the inclined plane of the second half section of the Oshiage projection (12), subsequently, is depressed by depression projection (13) and returned to a original location (X1). Therefore, there is no possibility that a boss (9) may be damaged, also in this case.

[0031] As a fictitious outline shows to drawing 1, the piece of a top (7a) will be pushed up at the tip of a key lever (31), and if a key is inserted in cylinder lock (29) and locking actuation is carried out in the condition which shows in drawing 1, drawing 2, and drawing 7 (a), an up-down lever (7) will be raised to the 2nd rise location which is mostly in agreement with a **** location, as shown in drawing 7 (d). At this time, each boss (9) is located just before the stopper side (13a) of a guidance implement (10), and the projected part (19a) of a stopper (19), and all drawers (2), (3), and (4) become drawer impossible.

[0032] In case an up-down lever (7) is raised by the key stroke, an up-down lever (7) goes up only to the 2nd rise location (X4) lower than the 1st rise location (X2), and a grasping implement (23) is only raised by the engagement pin (27), and does not grasp an engagement pin (27) in the meantime. Therefore, the big drag force at the time of an engagement pin (27) passing the maximum narrow interval (W) of a grasping implement (23) cannot act on the key stroke of cylinder lock (29), and can carry out a key stroke by ****.

[0033] moreover, the **** location (X3) and the 2nd rise location (X4) of an up-down lever (7) -- about -- by having made it do one The stopper side (13a) of a guidance implement (10) and vertical width of face of the projected part (19a) of a stopper (19) can be made into smallness. Like the drawer (2) of an upper case especially with a thin shape And it is useful when it is hard to secure the anchoring tooth space of a guidance implement (10) by the suspension (illustration abbreviation) for performing a drawer smoothly etc.

[0034] If cylinder lock (29) is unlocked by the key stroke, an up-down lever (7) will return to the original location (X1) shown in drawing 2 and drawing 7 (a) with a self-weight, and all drawers (2), (3), and (4) will become withdrawal.

[0035] In an above-mentioned example, in a multistage drawer cabinet, although cylinder lock (29) is coordinated and he is trying to also give a lock/unlock function to a coincidence drawer arrester, cylinder lock (29) may be omitted and carried out. Moreover, an up-down lever (7), a guidance implement (10), etc. are arranged in the right-and-left both-sides section of a box (1), and are pulled out, and you may enable it to demonstrate a coincidence drawer prevention function on both sides of (2), (3), and (4).

[0036]

[Effect of the Invention] According to this invention, the following effectiveness can be done so.

(a) By according to invention according to claim 1, having fitted into the projected part of the attachment member which fixed the hollow of a guidance implement on the side face of a drawer, and having ****ed and carried out the stop of the guidance implement to the attachment member Since it was

attached firmly and certainly and the projected part of an attachment member has fitted into the interior of a guidance implement as a core material, without a guidance implement separating simply from the side face of a drawer, it is hard to damage even if a load and an impact act on a guidance implement from the exterior.

[0037] (b) Moreover, since it was made for a setscrew to screw in the projected part of a guidance implement, while being able to take the large screwing cost of the point of a setscrew, the tip of a setscrew projects to a way among drawers, and there is no possibility that it might be said that a hold object was damaged.

[0038] (c) Since it was made for the projected part of an attachment member to fit in inside the Oshiage projection by which a load is applied most according to invention according to claim 2, while being able to raise the reinforcement of the Oshiage projection preponderantly and being able to increase endurance, small [of a guidance implement] and lightweight-ization can be attained.

[Translation done.]

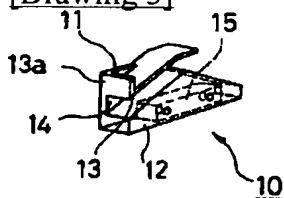
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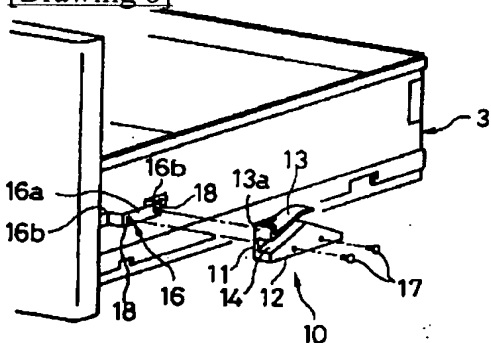
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DRAWINGS

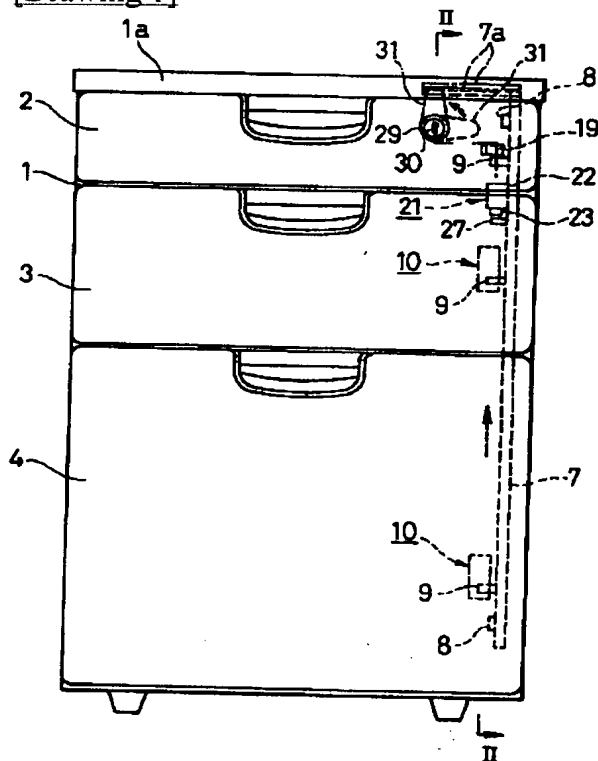
[Drawing 5]



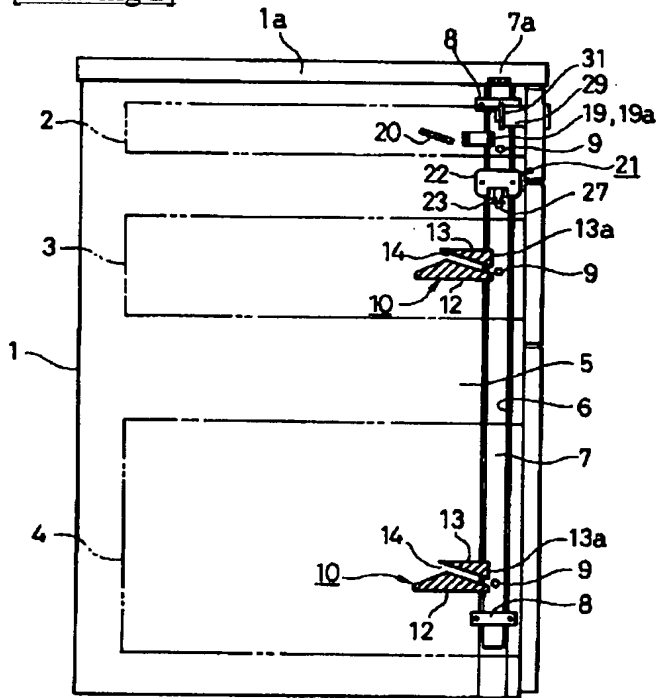
[Drawing 6]



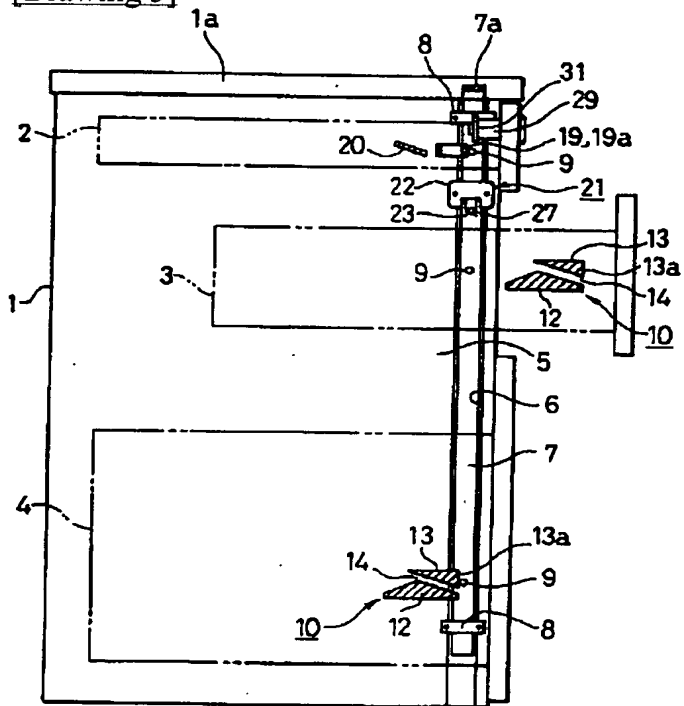
[Drawing 1]



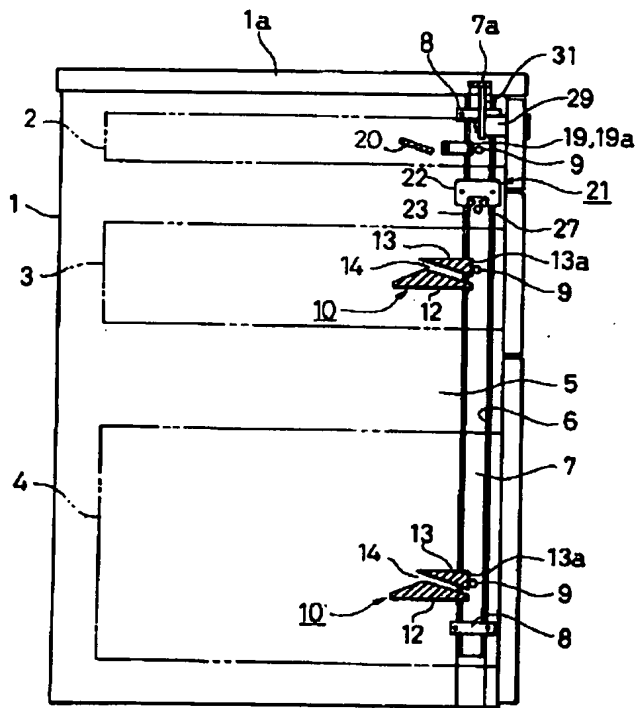
[Drawing 2]



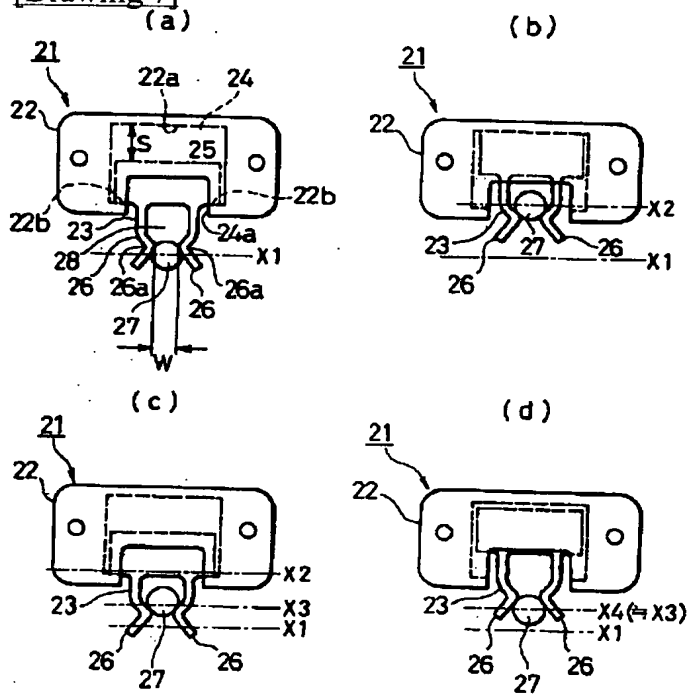
[Drawing 3]



[Drawing 4]



[Drawing 7]



[Translation done.]

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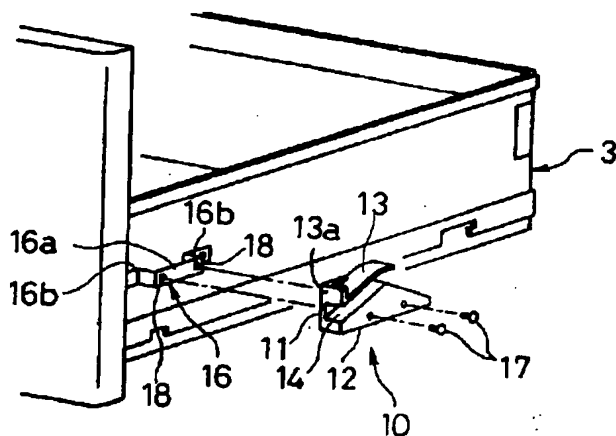
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(54) 【発明の名称】 多段引き出しキャビネットにおける同時引き出し防止装置

(57) 【要約】

【課題】 複数の引き出しの同時引き出しを防止する装置における案内具を、引き出しの側面に簡単かつ強固に取付けるとともに、耐久性を向上させる。

【解決手段】 キャビネットの箱体の内側面に上下動可能として装着した昇降杆と対向する引き出し3の側面に、外側方を向く突部16aにねじ孔18を有する取付部材16を固着し、かつ引き出し3の出し入れに伴って、昇降杆に突設した係合ピンを上下動させるように案内する押上突起12と押下突起13と各引き出し3の前方への移動を阻止するストッパ面13aとを有する案内具10の内側面に設けた凹所を、取付部材16の突部16aに嵌合して、ねじ孔18に螺合する止めねじ17により、案内具10を引き出し3の側面に固着する。



【特許請求の範囲】

【請求項1】 箱体内に複数の引き出しを上下に多段状に装着した多段引き出しキャビネットにおける箱体の内側面に昇降杆を上下動可能として装着し、該昇降杆の内側面の所要位置に複数の突子を設け、前記突子と対向する各引き出しの側面に、突子が等高となることにより突子と当接して、各引き出しの前方への移動を阻止するストッパ面と、突子がストッパ面より上下に離れている状態で、引き出しが前方へ移動することにより、前記突子と摺接して、昇降杆を上方に移動させる押上突起と、引き出しの後方への移動時に、前記突子と摺接して、昇降杆を下降させる押下突起とを備える案内具を設け、さらに箱体に、突子がストッパ面と等高となる位置において昇降杆を弾圧保持するキャッチを設けた多段引き出しキャビネットにおける同時引き出し防止装置において、昇降杆と対向する引き出しの側面に、外側方を向く突部にねじ孔を有する取付部材を固着し、かつ前記案内具の内側面に設けた凹所を、前記取付部材の突部に嵌合して、前記ねじ孔に螺合する止めねじにより、案内具を引き出しの側面に固着したことを特徴とする多段引き出しキャビネットにおける同時引き出し防止装置。

【請求項2】 凹所を、案内具における押上突起の内側に設けた請求項1記載の多段引き出しキャビネットにおける同時引き出し防止装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、上下複数段に引き出しを装着したキャビネットにおいて、複数の引き出しが同時に引き出されて、重心の前方移動によりキャビネットが前倒することを防止しうるようにした装置に関する。

【0002】 従来のこの種の装置としては、例えば実公昭60-18105号公報に開示されているようなものがある。この装置は、箱体内に複数の引き出しを上下に多段状に装着した多段引き出しキャビネットにおける箱体の内側面に昇降杆を上下動可能として装着し、該昇降杆の内側面の所要位置に複数の突子を設け、前記突子と対向する各引き出しの側面に、突子が等高となることにより突子と当接して、各引き出しの前方への移動を阻止するストッパ面と、突子がストッパ面より上下に離れている状態で、引き出しが前方へ移動することにより、前記突子と摺接して、昇降杆を上方に移動させる押上突起と、引き出しの後方への移動時に、前記突子と摺接して、昇降杆を下降させる押下突起とを備える案内具を設け、さらに箱体に、突子がストッパ面と等高となる位置において昇降杆を弾圧保持するキャッチを設けたものより、いずれか1個の引き出しが引き出されると、他の引き出しはすべてブロックされて、2個以上の引き出しが引き出されることがないようにしている。

【0003】 しかし、上述の従来の装置においては、案

内具の下面に逆T字状の取付片を一体的に形成して、これを引き出しの側面に固着した移動レールに穿設した取付孔に嵌合することにより、案内具を引き出しの側面に取り付けており、引き出しの出し入れに伴う、案内具への繰り返し負荷や衝撃のために、案内具が移動レールから外れたり、取付片がその基部から破損したりするおそれがある。

【0004】 本発明は、従来の技術が有する上記のような問題点に鑑み、案内具を引き出しの側面に簡単かつ強固に取付けることができるとともに、耐久性を向上させた多段引き出しキャビネットにおける同時引き出し防止装置を提供することを目的としている。

【0005】

【課題を解決するための手段】 本発明によると、上記課題は、次のようにして解決される。

(1) 箱体内に複数の引き出しを上下に多段状に装着した多段引き出しキャビネットにおける箱体の内側面に昇降杆を上下動可能として装着し、該昇降杆の内側面の所要位置に複数の突子を設け、前記突子と対向する各引き出しの側面に、突子が等高となることにより突子と当接して、各引き出しの前方への移動を阻止するストッパ面と、突子がストッパ面より上下に離れている状態で、引き出しが前方へ移動することにより、前記突子と摺接して、昇降杆を上方に移動させる押上突起と、引き出しの後方への移動時に、前記突子と摺接して、昇降杆を下降させる押下突起とを備える案内具を設け、さらに箱体に、突子がストッパ面と等高となる位置において昇降杆を弾圧保持するキャッチを設けた多段引き出しキャビネットにおける同時引き出し防止装置において、昇降杆と対向する引き出しの側面に、外側方を向く突部にねじ孔を有する取付部材を固着し、かつ前記案内具の内側面に設けた凹所を、前記取付部材の突部に嵌合して、前記ねじ孔に螺合する止めねじにより、案内具を引き出しの側面に固着する。

【0006】 (2) 上記(1)項において、凹所を、案内具における押上突起の内側に設ける。

【0007】

【発明の実施の形態】 図1は、本発明の一実施例を備えた書類収納用キャビネットを示し、キャビネットの箱体(1)内には、上下方向の寸法を下段のものほど大とした上中下3段の引き出し(2)(3)(4)が収容されている。図1～7は、本発明装置の一実施例を示すものである。

【0008】 箱体(1)の右方の側板(5)の内側面のやや前部に形成された上下方向に長い凹溝(6)には、箱体(1)の高さより若干短寸の昇降杆(7)が上下方向に摺動自在に嵌合されており、上下1対の支持板(8)(8)により昇降杆(7)が凹溝(6)から脱落するのが阻止されている。昇降杆(7)における各引き出しに対応する位置には、3個の内向きの突子(9)が突設されており、また昇降杆(7)の上端部には、箱体(1)における上筐(1a)内

において内方に向かって水平に延出する上片(7a)が連設されている。

【0009】中段と下段の引き出し(3)(4)の右側面における前記突起(9)とほぼ等高の個所には、案内具(10)の垂直の基板(11)が固着されている。

【0010】図5及び図6に示すように、この案内具(10)の基板(11)の外側面下部には、上向山形の押上突起(12)が、同じく外側面上部には、底面が後上方に傾斜する三角形の押下突起(13)が連設され、両突起(12)(13)間には、前記突起(9)が前後に通過しうる前下方を向く傾斜溝(14)が形成されている。押下突起(13)の前端面は、垂直なストッパ面(13a)をなしている。

【0011】基板(11)における押上突起(12)の内側に位置する部分には、前後方向に長い長溝状の凹所(15)が形成されている。

【0012】この案内具(10)は、図6に示すように、昇降杆(7)と対向する引き出し(3)(4)の側面に、平面視コ字状をなして外側方に向かって突出する突部(16a)を中間部に有する帯板材よりなる取付部材(16)の前後の取付片(16b)を溶着し、取付部材(16)の突部(16a)に凹所(15)を外嵌させ、かつその外側から貫通させた前後1対の止めねじ(17)を、突部(16a)の遊端面に穿設した前後1対のねじ孔(18)に螺合させることにより、引き出し(3)(4)の側面に強固に固着されている。このとき、止めねじ(17)の先端部は、取付部材(16)の突部(16a)の存在により、引き出し(3)(4)の側面には触れていない。

【0013】上段の引き出し(2)の右側面における突起(9)より後方の部分には、取付部材(16)と同様に、中間部に平面視コ字状をなして外側方に突出する突部(この突部の前端面がストッパ面となる)(19a)を有するストッパ(19)の前後の取付片(19b)が、溶接またはねじ止め等により固着されている。このストッパ(19)の上下方向の位置は、図2に示すように、昇降杆(7)が下限位置である原位置に位置しているときは、最も上方の突起(9)より上方に位置し、昇降杆(7)が、後述するような図3に示す吊下位置、及び図4に示す第2上昇位置に位置しているときは、突起(9)とほぼ等高となるようにしている。

【0014】上段の引き出し(2)の右側面におけるストッパ(19)の後方の部分には、上述の押下突起(13)の底面と同様に後上方に向かって傾斜する押下板(20)が設けられている。

【0015】箱体(1)の右方の側板(5)の内側面上部には、キャッチ(21)が設けられている。キャッチ(21)は、昇降杆(7)が収容されている凹溝(6)を跨ぐようにして側板(5)に固着された固定具(22)と、この固定具(22)に若干上下動可能として装着された把持具(23)とからなっている。

【0016】固定具(22)の中央には、上端が上壁(22a)により閉塞され、かつ下端が開口する空所(24)が形成さ

れている。空所(24)の下端部の両側縁部には、互いに対向する内向き突起(22b)が形成され、これによって空所(24)の下端の開口部(24a)は狭められている。

【0017】把持具(23)は、固定具(22)の空所(24)内に、ストローク(S)(図7(a)参照)だけ上下方向に摺動可能として嵌合された直方体状の基部(25)と、基部(25)の下面より固定具(22)の開口部(24a)を通して垂下する弾性撓曲可能な1対の把持片(26)(26)とからなっている。

【0018】両把持片(26)(26)の下端部には、互いに内方に向かってく字状に屈曲する屈曲部(26a)(26a)が形成されており、両屈曲部(26a)(26a)間の最狭間隔(W)は、キャッチ(21)に対応して昇降杆(7)の内面に突設した係合ピン(27)の直径より小としている。

【0019】基部(25)の下面と両把持片(26)(26)とその屈曲部(26a)(26a)との間には、係合ピン(27)が両把持片(26)(26)間に把持された状態で若干上下方向に遊動しうるようにした空所(28)が形成されている。

【0020】上段の引き出し(2)の前面右側無には、シリンダ錠(29)が設けられている。このシリンダ錠(29)は、前面のキー挿入溝(30)にキー(図示略)を挿入して、内部のロータ(図示略)をほぼ90°回転させることにより、ロータと一体のキーレバー(31)を、図1に破線で示す右側方を向く解錠位置から、同じく想像線で示すように、真上を向く施錠位置まで回転させ、このとき、キーレバー(31)の先端部が、箱体(1)の上框(1a)内に突入して、引き出し(2)の前進を阻止するとともに、キーレバー(31)の先端で昇降杆(7)の上片(7a)を押し上げ、昇降杆(7)を後述する第2上昇位置まで上昇しうようになっている。

【0021】上述の装置において、図1及び図2に示すように、全引き出し(2)(3)(4)が押し入れられ、シリンダ錠(29)が解錠されているときには、昇降杆(7)は、自重により下限位置である原位置に位置している。このとき、各案内具(10)の傾斜溝(14)の前端は、昇降杆(7)の突起(9)の直後に位置し、また上段の引き出し(2)のストッパ(19)の突部(19a)は、対応する突起(9)の上方に位置している。従って各引き出し(3)は、自由に引き出すことができる。

【0022】また図7(a)に示すように、キャッチ(21)の把持具(23)は、固定具(22)の内向き突起(22b)に基部(25)の(36a)が当接し、かつ両把持片(26)の下端部と係合ピン(27)と当接するか、または近接する状態にあり、基部(25)の上面と固定具(22)の上壁(22a)との間にはストローク(S)が存在している。このときの係合ピン(27)(及び昇降杆(7))の位置を、図7(a)に原位置(X1)として示している。

【0023】この状態から、図3に示すように、たとえば中段の引き出し(3)を引き出すと、突起(9)は、中段の案内具(10)の傾斜溝(14)を通過する際に、押上突起(1

2)により押し上げられ、それに伴って昇降杆(7)も上昇させられる。この昇降杆(7)の上昇に連動して把持具(23)は係合ピン(27)によりストローク(S)だけ押し上げられ、図7(b)に示すように、把持具(23)の上端が上壁(22a)に当接した後は、係合ピン(27)のみが両把持片(26)(26)の屈曲部(26a)(26a)を押し拡げつつ上昇し、空所(28)内に嵌入する。

【0024】係合ピン(27)(及び昇降杆(7))が上限位置である第1上昇位置(X2)に達した状態を示している。

【0025】図7(b)は、突起(9)が傾斜溝(14)を通過した後は、図7(c)に示すように、昇降杆(7)は、把持具(23)に把持されたままの状態で自重により、把持具(23)が下限位置に達する吊支位置(X3)まで下降する。この吊支位置(X3)は、後述するキー操作により昇降杆(7)を上昇させたときの上限位置である第2上昇位置(X4)とほぼ一致する。

【0026】昇降杆(7)が吊支位置(X3)に位置しているとき、各案内具(10)のストッパ面(13a)及びストッパ(19)の突部(19a)の前端面と各突起(9)とが等高となる。従って、上段と下段の引き出し(2)(4)は、各突起(9)により前進が阻止されて引き出すことはできない。

【0027】上述の状態、中段の引き出し(3)を押し入れると、中段の突起(9)は、案内具(10)の傾斜溝(14)を通過する際、押下突起(13)により押し下げられ、係合ピン(27)がキャッチ(21)の把持具(23)から強制的に離脱させられ、昇降杆(7)は図7(a)に示す原位置(X1)まで下降させられる。従って、その後は、いずれの引き出し(3)でも引き出すことができるようになる。

【0028】図2に示す状態から、上段の引き出し(2)を引き出したときは、ストッパ(19)及び押下板(20)が上段の突起(9)の上方を通過するだけで、突起(9)及び昇降杆(7)が上昇させられることはない。従って、上段の引き出し(2)を引き出したままで、他の引き出し(3)または(4)を引き出すことができる。これは、上段の引き出し(2)は収容量を小さく、かつ軽量としてあるので、他の引き出し(3)または(4)と同時に引き出しても、キャビネットの転倒を招くおそれがないからである。

【0029】上段の引き出し(2)を引き出した状態で、他のいずれかの引き出し(3)または(4)と同時に引き出し、昇降杆(7)が吊支位置(X3)に保持された後、上段の引き出し(2)を後方に押し込むと、対応する突起(9)が押下板(20)に摺接して押し下げられ、昇降杆(7)は原位置(X1)に復帰させられる。従って、突起(9)がストッパ(19)及び突部(19a)の後端面に当接して破損するといったおそれはない。

【0030】その後さらに他の引き出し(3)または(4)を後方に押し込んだときは、対応する突起(9)は、押下突起(13)の後半部の傾斜面に沿って押し上げられ、次いで、押下突起(13)により押し下げられて原位置(X1)に復帰させられる。従って、この場合にも、突起(9)が破

損するおそれはない。

【0031】図1、図2及び図7(a)に示す状態で、シリンダ錠(29)にキーを挿入して施錠操作すると、図1に想像線で示すように、キーレバー(31)の先端で上片(7a)が押し上げられ、昇降杆(7)は、図7(d)に示すように、吊支位置とほぼ一致する第2上昇位置まで上昇させられる。このとき、各突起(9)は、案内具(10)のストッパ面(13a)及びストッパ(19)の突部(19a)の直前に位置し、すべての引き出し(2)(3)(4)は引き出し不能となる。

【0032】キー操作により昇降杆(7)を持ち上げる際は、昇降杆(7)は、第1上昇位置(X2)より低い第2上昇位置(X4)までしか上昇せず、その間に、把持具(23)は、係合ピン(27)により持ち上げられるだけで、係合ピン(27)を把持することはない。従って、係合ピン(27)が把持具(23)の最狭間隔(W)を通過する際の大きな抵抗力がシリンダ錠(29)のキー操作に作用することがなく、軽力でキー操作することができる。

【0033】また、昇降杆(7)の吊支位置(X3)と第2上昇位置(X4)とをほぼ一致させたことにより、案内具(10)のストッパ面(13a)及びストッパ(19)の突部(19a)の上下幅を小さくすることができ、特に、上段の引き出し(2)のように、薄型で、しかも引き出しを円滑に行なうためのサスペンション(図示略)等により、案内具(10)の取付けスペースが確保しにくい場合に有益である。

【0034】シリンダ錠(29)をキー操作により解錠すると、昇降杆(7)は、自重により図2及び図7(a)に示す原位置(X1)に復帰し、すべての引き出し(2)(3)(4)は引き出し可能となる。

【0035】上述の実施例においては、多段引き出しキャビネットにおいて、同時引き出し防止装置にシリンダ錠(29)を連係し、施錠機能をもたせるようにしているが、シリンダ錠(29)を省略して実施することもある。また、昇降杆(7)、案内具(10)等を、箱体(1)の左右両側部に配設し、引き出し(2)(3)(4)の両側で、同時引き出し防止機能を発揮しうるようにしてもよい。

【0036】

【発明の効果】本発明によると、次のような効果を奏することができる。

(a) 請求項1記載の発明によると、案内具の凹所を、引き出しの側面に固着した取付部材の突部に嵌合して、案内具を取付部材にねじ止めしたことにより、案内具が、引き出しの側面から簡単に外れることなく、強固に、かつ確実に取付けられ、また案内具の内部に取付部材の突部が芯材として嵌合しているので、外部から案内具に負荷や衝撃が作用しても破損しにくい。

【0037】(b) また、案内具の突部に止めねじが螺合するようにしたので、止めねじの先端部の螺合代を大きく取れるとともに、止めねじの先端が引き出しの内方に突出して、収容物を傷つけるといったおそれがない。

【0038】(c) 請求項2記載の発明によると、最も負荷がかかる押上突起の内側に取付部材の突部が嵌合するようにしたので、押上突起の強度を重点的に向上させ、耐久性を増すことができるとともに、案内具の小型、軽量化を図ることができる。

【図面の簡単な説明】

【図1】本発明の一実施例を備えたキャビネットの解錠時の概略縦断側面図である。

【図2】同じく、正面図である。

【図3】同じく、1個の引き出しを引き出したときの概略縦断側面図である。

【図4】同じく、施錠時の概略縦断側面図である。

【図5】案内具の斜視図である。

【図6】案内具の取り付け状態を示す要部の分解斜視図である。

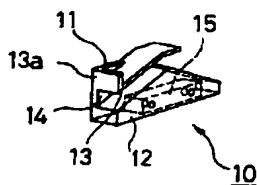
【図7】キャッチの作動状態を示す説明図である。

【符号の説明】

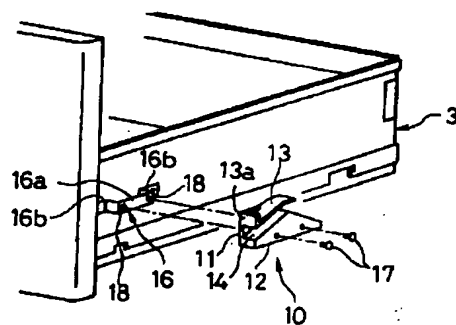
- (1) 箱体
- (1a) 上框
- (2)(3)(4) 引き出し
- (5) 側板
- (6) 凹溝
- (7) 昇降杆
- (7a) 上片
- (8) 支持板
- (9) 突子
- (10) 案内具
- (11) 基板
- (12) 押上突起
- (13) 押下突起

- (13a) ストッパ面
- (14) 傾斜溝
- (15) 凹所
- (16) 取付部材
- (16a) 突部
- (16b) 取付片
- (17) 止めねじ
- (18) ねじ孔
- (19) ストッパ
- (19a) 突部
- (19b) 取付片
- (20) 押下杆
- (21) キャッチ
- (22) 固定具
- (22) 上壁
- (22a) 内向き突起
- (22b) 内向き突起
- (23) 把持具
- (24) 空所
- (24a) 開口部
- (25) 基部
- (26) 把持片
- (26a) 屈曲部
- (27) 係合ピン
- (28) 空所
- (29) シリンダ錠
- (30) キー挿入溝
- (31) キーレバー
- (S) ストローク
- (W) 最狭間隔

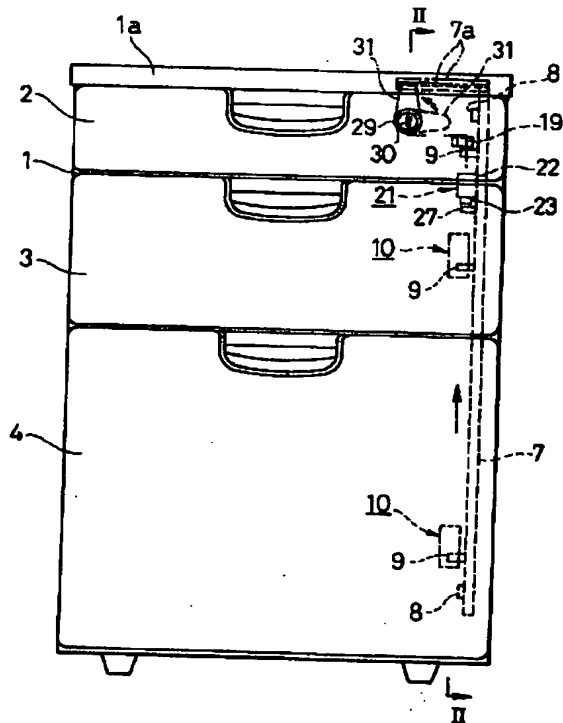
【図5】



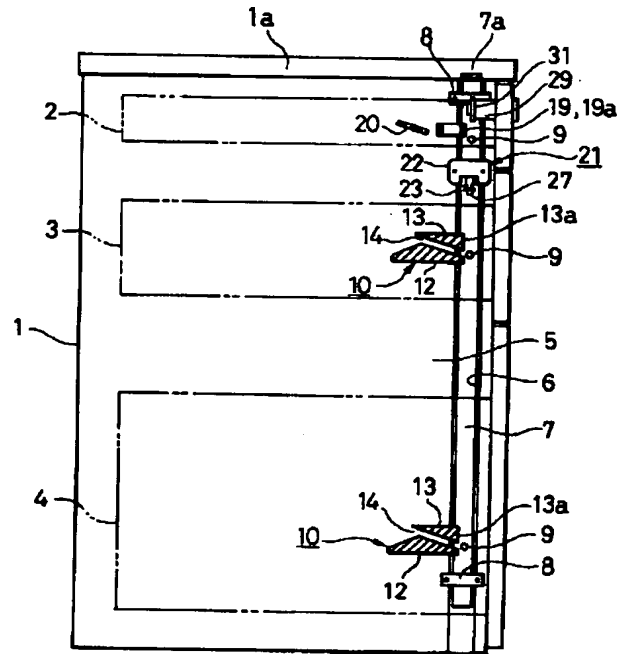
【図6】



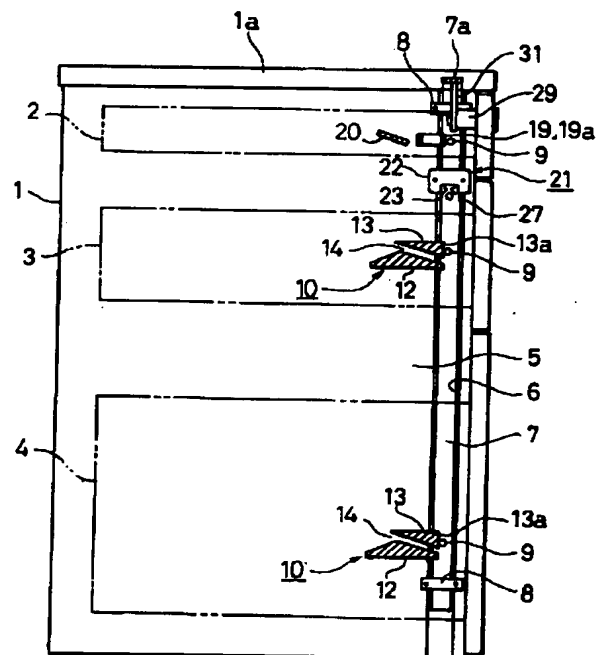
【図1】



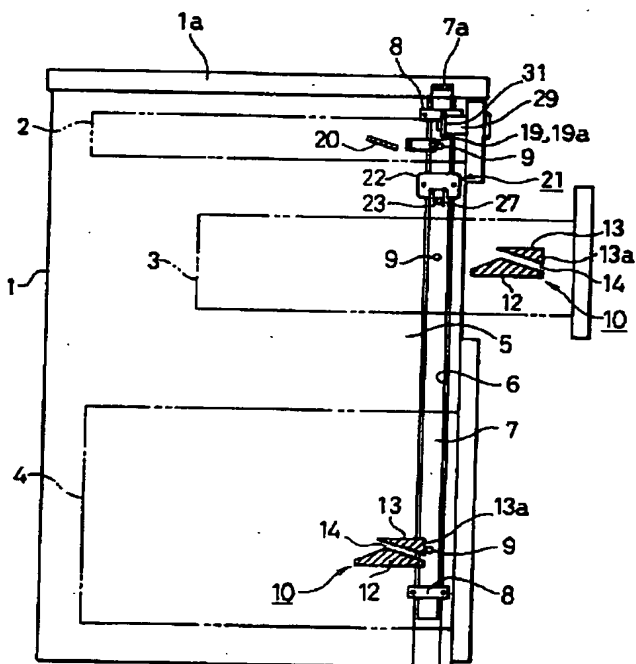
【図2】



【図4】



【図3】



【图 7】

